

Patent Claims

1. A device for inspecting filled and sealed containers, consisting of a carousel (3) in which the containers (F) that are to be tested can be rotated about their longitudinal axis so that the contents in the containers begin to rotate at a sufficient speed to cause any foreign bodies that might be present to be stirred up from the bottom of the vessel, and consisting of a second carousel (4) which follows the first in the direction of conveyance for conveying containers with a bottom clearance, this carousel being assigned at least one inspection device (20) that operates by the dark field method for detecting light scattering foreign bodies in the container contents, characterized in that the two carousels (3, 4) are arranged side by side with their partial circles tangent so that the containers (F) can be transferred directly from the first carousel (3) to the second carousel (4).

2. The device according to Claim 1, characterized in that a star wheel (2) which transports the containers with a bottom clearance is arranged upstream from the first carousel (3) as seen in the direction of transport and is assigned at least one bottom blow-off device (10) and/or a bottom inspection station (11) that operates by the bright field method.

3. The device according to Claim 1 or 2, characterized in that an intake inspection (9) for checking the filling levels and/or the container closures is provided upstream from the star wheel (2) and/or the first carousel (3).

4. The device according to Claim 3, characterized in that unsealed containers are not transferred from the star wheel (2) or the first carousel (3).

5. The device according to at least one of Claims 1 through 4, characterized in that the first carousel (3) has multiple drivable rotating tables (12) on a partial circle, said disks being engageable or disengageable in a frictionally locked manner via controllable magnetic couplings (23, 27) with a drive element that all the rotating tables have in common (14,15).

6. The device according to Claim 5, characterized in that the magnetic clutches (23, 27) are hysteresis clutches with a variable torque.

7. The device according at least one of the preceding Claims 1 through 6, characterized in that luminescent screens (18, 19) that are diametrically opposed and are adapted to the curvature of the path so they are equidistant are provided in at least some sections on both sides of the peripheral path of the second carousel (4), simultaneously lighting up the containers (F) laterally at the same time while the bottom is being photographed.

8. The device according to Claim 7, characterized in that the luminescent screens (18, 19) are equipped with LEDs that can be triggered in a pulsating pattern and are always triggerable simultaneously with a photograph of the bottom.